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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/976,011 | 10/15/2001 | Toshinori Moriga | Q66612 | 9607 |

7590 07/30/2004
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Washington, DC 20037-3213

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| EXAMINER |
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GORR, RACHEL F

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| ART UNIT | PAPER NUMBER |
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1711

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/976,011 | MORIGA ET AL. | |
| | Examiner | Art Unit | |
| | Rachel F. Gorr | 1711 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 24, 25, 28, 29, 32, 33, 40, 42 and 45-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word "type" in these claims makes the claims indefinite. It should be deleted. (Ex parte Copenhaver, 109 USPQ 118).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-23, 26, 27, 30, 31, 34-39, 41, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Szycher.

4. Hashimoto discloses polyurethane sealing gaskets made from polyurethane prepolymers having a functionality of 2-3 and the NCO content specified in the applicants' claims and polyols having OH numbers of 35 and 67 and functionalities of 2-3 (see example 4). The prepolymer, which is a urethane modified polyisocyanate would have an NCO content of 21 wt. %, and the 2000 molecular weight glycol has a hydroxyl value of 56. He discloses polyols having molecular weights of 400-3000 (col. 4, line 54), and teaches that mixtures of any of these can be used. He reacts the gasket components on the surface of the caps to form integral gaskets (see examples). He shows the same properties of the claims (col. 2, lines 18-19, 24-25), and he discloses no weight loss of the gasket over time (see abstract), which would mean that nothing is extracted from the gasket. He differs from the claims by using an aromatic

polyisocyanate (polymeric diphenylmethane diisocyanate - pMDI) versus using an aliphatic or cycloaliphatic polyisocyanate, and he forms the gasket at lower temperatures.

5. Szycher discloses that aliphatic polyisocyanates are more hydrolytically stable than MDI (bottom page 4-31 – top page 4-32), and lower in reactivity. On page 4-33, he shows that hexamethylene diisocyanate (HDI) and isophorone diisocyanate (IPDI) are two of the three most common aliphatic polyisocyanates.

6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use aliphatic polyisocyanate rather than MDI in Hashimoto's gaskets because Szycher teaches better hydrolytic stability. It would be obvious to process a less reactive polyisocyanate at higher temperatures to shorten the reaction time.

7. Applicant's arguments filed 6-25-04 have been fully considered but they are not persuasive. The applicants argue that the pMDI used by Hashimoto is toxic. The claims are rejected over Hashimoto in view of Szycher. The applicants argue that their invention has better properties. Hashimoto's polyurethane meets all the specified properties of the claims. They argue that not losing weight isn't the same as no extractables and they show that their comparison example has a higher amount extracted than specified by the claims. The comparison example isn't the same as Hashimoto's polyurethane.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel F. Gorr whose telephone number is 571-272-

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1072. The examiner can normally be reached on Mon., Tues., Thurs., Fri., from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R.G.
July 26, 2004


RACHEL GORR
PRIMARY EXAMINER